

WHAT IS CLAIMED IS:

1 1. A cutting instrument, comprising
2 an outer member having a cutting edge; and
3 a helical knife coupled to the outer member for rotation relative to the outer member,
4 at least a portion of the helical knife extending distally beyond the cutting edge of the outer
5 member.

1 1 2. The instrument of claim 1, further comprising
2 an inner member received within the outer member, the helical knife being located at
3 a distal end of the inner member.

1 1 3. The instrument of claim 2 wherein a clearance between the inner member and the
2 outer member is in the range of about 0.0005 to 0.002 inches.

1 1 4. The instrument of claim 2 wherein the inner member defines an aspiration opening,
2 the aspiration opening being located at a proximal end of the helical knife.

1 1 5. The instrument of claim 1 wherein the helical knife includes a helical edge and a
2 helical channel.

1 1 6. The instrument of claim 5 wherein the helical channel has a proximal end, a distal
2 end, and a pitch, the pitch of the helical channel increasing from the distal end to the
3 proximal end.

1 1 7. The instrument of claim 5 wherein the helical channel terminates in an opening
2 through a wall of the inner member.

1 1 8. The instrument of claim 1, further comprising a hub coupling the inner member to the
2 outer member.

1 9. The instrument of claim 1 wherein the outer member defines a fluid ingress opening
2 through a wall of the outer member in a distal region of the outer member.

1 10. The instrument of claim 1 wherein the cutting edge is located at a distal end of the
2 outer member.

1 11. The instrument of claim 1 wherein the outer member tapers to the cutting edge.

1 12. The instrument of claim 1 wherein the cutting edge comprises a circumferential
2 cutting edge.

1 13. The instrument of claim 12 wherein the cutting edge is circular in shape.

1 14. The instrument of claim 1 wherein the cutting edge is part-circumferential.

1 15. The instrument of claim 14 wherein the cutting edge is circular in shape.

1 16. The instrument of claim 14 wherein the cutting edge is oblong in shape.

1 17. The instrument of claim 1 wherein the outer member includes a shield portion
2 extending distally from the cutting edge.

1 18. A method of cutting, comprising
2 slicing into tissue with a helical knife to draw tissue proximally toward a cutting
3 portion; and
4 cutting the tissue with the cutting portion.

1 19. The method of claim 18, wherein cutting the tissue comprises cutting the tissue into
2 discrete pieces.

1 20. The method of claim 18, further comprising providing the helical knife on an inner
2 member and the cutting portion on an outer member.

- 1 21. The method of claim 20, further comprising transporting the cut tissue along a helical
- 2 channel defined by the helical knife.
- 1 22. The method of claim 21, further comprising aspirating the cut tissue through a hollow
- 2 interior in the inner member.
- 1 23. The method of claim 22 wherein aspirating the cut tissue comprises aspirating the cut
- 2 tissue through an opening in a wall of the inner member.
- 1 24. The method of claim 20, further comprising aspirating fluid through an opening in the
- 2 outer member.